

**Amendments to the claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-168 (canceled)

169. (previously presented) A process for determining whether a chemical compound is a human melanin concentrating hormone (MCH1) receptor antagonist which comprises contacting cells transfected with and expressing DNA encoding the human MCH1 receptor with the compound in the presence of a known human MCH1 receptor agonist, and contacting cells separately with only the agonist, under conditions permitting the activation of the human MCH1 receptor, and detecting a decrease in human MCH1 receptor activity compared to cells contacted only with the agonist, so as to thereby determine whether the compound is a human MCH1 receptor antagonist; wherein the human MCH1 receptor is encoded by an isolated nucleic acid having consecutive nucleotides having
- 1) the sequence beginning with the start codon at positions 1-3, and ending at the stop codon at positions 1267-1269 as indicated in Figure 1 (SEQ ID NO: 1) or
  - 2) the sequence beginning with the start codon at positions 16-18, and ending at the stop codon at positions 1267-1269 as indicated in Figure 1 (SEQ ID NO: 1) and
- wherein the human MCH1 receptor is activated by melanin concentrating hormone.
170. (previously presented) A process for determining whether a chemical compound specifically binds to and inhibits activation of a human melanin concentrating

hormone (MCH1) receptor, which comprises separately contacting cells expressing on their cell surface the human MCH1 receptor and producing a second messenger response upon activation of the human MCH1 receptor, wherein such cells do not normally express the human MCH1 receptor, with both the chemical compound and a second chemical compound known to activate the human MCH1 receptor, and with only the second chemical compound, under conditions suitable for activation of the human MCH1 receptor, and measuring the second messenger response in the presence of only the second chemical compound and in the presence of both the second chemical compound and the chemical compound, a smaller change in the second messenger response in the presence of both the chemical compound and the second chemical compound than in the presence of only the second chemical compound indicating that the chemical compound inhibits activation of the human MCH1 receptor; wherein the human MCH1 receptor is encoded by an isolated nucleic acid having consecutive nucleotides having

- 1) the sequence beginning with the start codon at positions 1-3, and ending at the stop codon at positions 1267-1269 as indicated in Figure 1 (SEQ ID NO: 1) or
- 2) the sequence beginning with the start codon at positions 16-18, and ending at the stop codon at positions 1267-1269 as indicated in Figure 1 (SEQ ID NO: 1) and

wherein the human MCH1 receptor is activated by melanin concentrating hormone.

171. (previously presented) The process of claim 170, wherein the second messenger response comprises chloride channel activation and the change in second messenger response is a smaller increase in the level of inward chloride current in the presence of both the chemical compound and the second chemical compound than in the presence of only the second chemical compound.

172. (previously presented) The process of claim 170, wherein the second messenger response comprises inositol phosphate release and the change in second messenger response is a smaller increase in the level of inositol phosphate release in the presence of both the chemical compound and the second chemical compound than in the presence of only the second chemical compound.
173. (previously presented) The process of claim 170, wherein the second messenger response comprises intracellular calcium levels and the change in second messenger response is a smaller increase in intracellular calcium levels in the presence of both the chemical compound and the second chemical compound than in the presence of only the second chemical compound.
174. (previously presented) A process of screening a plurality of chemical compounds not known to inhibit the activation of a human melanin concentrating hormone (MCH1) receptor to identify a compound which inhibits the activation of the human MCH1 receptor, which comprises:
- (a) contacting cells transfected with and expressing the human MCH1 receptor, wherein such cells do not normally express the human MCH1 receptor, with the plurality of compounds in the presence of a known human MCH1 receptor agonist, under conditions permitting activation of the human MCH1 receptor;
  - (b) determining whether the activation of the human MCH1 receptor is reduced in the presence of the plurality of compounds, relative to the activation of the human MCH1 receptor in the absence of the plurality of compounds; and if so

- (c) separately determining the inhibition of activation of the human MCH1 receptor for each compound included in the plurality of compounds, so as to thereby identify the compound which inhibits the activation of the human MCH1 receptor;

wherein the human MCH1 receptor is encoded by an isolated nucleic acid having consecutive nucleotides having

- 1) the sequence beginning with the start codon at positions 1-3, and ending at the stop codon at positions 1267-1269 as indicated in Figure 1 (SEQ ID NO: 1) or
- 2) the sequence beginning with the start codon at positions 16-18, and ending at the stop codon at positions 1267-1269 as indicated in Figure 1 (SEQ ID NO: 1) and

wherein the human MCH1 receptor is activated by melanin concentrating hormone.

- 175. (previously presented) A process for preparing a pharmaceutical composition which comprises admixing a pharmaceutically acceptable carrier and a therapeutically effective amount of a chemical compound identified by the process of any of claims 169, 170, or 174.
- 176. (previously presented) The process of any of claims 169, 170 or 174, wherein the cell is an insect cell.
- 177. (previously presented) The process of claim 176, wherein the insect cell is an Sf9, an Sf21, or a High Five cell.
- 178. (previously presented) The process of any of claims 169, 170, or 174, wherein the cell is a mammalian cell.

179. (previously presented) The process of claim 178, wherein the mammalian cell is nonneuronal in origin.
180. (currently amended) The process of claim ~~[[177]]~~ 179, wherein the nonneuronal cell is a COS-7 cell, a CHO cell, a 293 human embryonic kidney cell, an NIH-3T3 cell, a mouse Y1 cell, or an LM(tk-) cell.